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The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
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C-A OPERATIONS PROCEDURES MANUAL

2.11 Conduct of Operations for Accelerator Physicists and Systems Specialists

Text Pages 2 through 5

Attachments

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Approved: _____ ***Signature on File*** _____
Collider-Accelerator Department Chairman Date

P. Ingrassia, E. Lessard

2.11 Conduct of Operations for Accelerator Physicists and Systems Specialists

1. Purpose

To provide instructions to Accelerator Physicists and System Specialists concerning directly making changes to the state of the accelerator, changing the state of the accelerator is defined as performing studies (see below), and making physical accesses into High Radiation Areas.

Definitions:

Dedicated Study -- a study which explores new ways to configure parts of the accelerator. These studies are scheduled in advance by the Scheduling Physicist and announced to Users since the studies are sometimes destructive from the point of view of the Physics Program. These studies require Accelerator Physicists and Systems Specialists to follow this procedure and to complete the "Safety Review Sheet for Dedicated Accelerator Studies".

Study -- a study in which the Accelerator Physicist or System Specialist actively participates in the adjustment of machine parameters. Typical examples are calibrating PUEs or checking if a Tune Meter is working properly. These studies do not require notification of the Scheduling Physicist since these studies shall not be destructive from the point of view of the Physics program. These studies require Accelerator Physicists and Systems Specialists to follow this procedure, but they DO NOT complete the "Safety Review Sheet for Dedicated Accelerator Studies".

High Radiation Areas are indicated by Postings: In particular, the Booster and AGS rings, proton beam lines and target areas, are High Radiation Areas.

2. Responsibilities

- 2.1 It is the responsibility of Accelerator Physicists and Systems Specialists to request permission from the on-duty Operations Coordinator (OC) prior to using the controls of the C-A Complex. It is the responsibility of the Accelerator Physicist or System Specialist to see that appropriate work planning is done prior to access into a High Radiation Area.
- 2.2 It is the responsibility of the on-duty Operations Coordinator to record authorization to use the accelerator controls in the Operations Coordinator's Log Book, and to start Dedicated Accelerator Studies ([C-A-OPM-ATT 2.11.a](#)).
- 2.3 It is the responsibility of the Accelerator Division Head, Associate Division Head, Deputy Division Head, or Accelerator Physics Group Leader from the Injectors, Collider, or Operations Analysis Group to review all dedicated studies to determine if additional training, design review, formal safety review or written procedures are required.

3. Prerequisites

3.1 Permission by Operations Coordinator is required in order for Accelerator Physicists and Systems Specialists to make changes to the state of the accelerator.

3.1.1 Accelerator Physicists and Systems Specialists shall be familiar with Sec. 2.3.2 and 2.3.2.1 of [C-A-OPM 2.1](#) and the lines of authority shown in attachment 8.1 of that OPM.

3.2 Permission is to be granted only to persons who have completed the appropriate training program.

4. Precautions

Unless authorized by the Security Group Leader, either Accelerator Physicists, or Systems Specialists, may not exercise control of the security system components at the MCR_2 and MCR_1 control consoles.

5. Procedure

5.1 The Accelerator Physicist or Systems Specialist shall make the on-duty Operations Coordinator, or his designate, aware of any test or work plan that he wishes to execute at the controls of the accelerator.

5.1.1 IF the study qualifies as a Dedicated Study, THEN the Accelerator Physicist or Systems Specialist shall complete items 1 through 6 of the Safety Review Sheet for Accelerator Studies (see [C-A-OPM-ATT 2.11.a](#))

5.2 The on-duty Operations Coordinator, or designee, will grant trained Systems Specialists or Accelerator Physicists access to the controls.

5.3 The on-duty Operations Coordinator, or designee, will verify that the proposed test or work plan is within the Safety Envelope of the C-A Complex.

5.3.1 If the study qualifies as a Dedicated Study, THEN the on-duty Operations Coordinator, or designee, shall ensure completion of the Safety Review Sheet for Accelerator Studies.

5.4 IF the study qualifies as a Dedicated Study, THEN the Accelerator Division Head, Associate Division Head, Deputy Division Head, or Accelerator Physics Group Leader from the Injectors, Collider, or Operations Analysis Group shall review the study to determine if additional training, design review, formal safety review or written procedures are required.

5.4.1 IF additional training, design review, formal safety review or written procedures are needed, THEN the Accelerator Division Head, Associate Division Head, Deputy Division Head, Accelerator Physics Group Leader from the Injectors, Collider, or Operations Analysis Group shall ensure these reviews or procedures are initiated by informing the Head of the C-A Safety Division or C-A Associate Chair for ESHQ.

5.5 For A Dedicated Study

5.5.1 The OC shall make an entry into the Operations Coordinators Log Book stating:

- Permission was given to an Accelerator Physicist or Systems Specialist to use the controls.
- The study to be performed
- The study start and stop times
- The form “Safety Review For Dedicated Accelerator Studies” has been filled out.

5.6 If the accelerator physicist or system specialist needs to make an access into a High Radiation Area, and if this individual is not involved with regular and frequent Work Planning, then he or she must take part in specific documented Work Planning beyond that provided by Standing RWP’s and EWP’s to cover this access. The C-A Maintenance Coordinator is an appropriate Work Planner to accomplish the required planning and documentation.

6. Documentation

6.1 The Operations Coordinator will make an entry into the Operations Coordinators Log Book that notes permission given to an Accelerator Physicist or Systems Specialist and what test or work plan was performed.

6.2 The Operations Coordinator will collect completed Safety Review Sheets for Accelerator Studies, and any associated outlines of the study, and maintain them in a log/ring binder dedicated for this purpose. This log/ring binder is to be retained in the MCR.

6.3 Accelerator Physicists or Systems Specialists will summarize their work in the appropriate Start-up Book or in the Operations Log Book.

7. **References**

7.1 [C-A-OPM 2.1 “C-A Operation and Organization & Administration”](#)

8. **Attachments**

8.1 [C-A-OPM-ATT 2.11.a, “C-A Safety Review Sheet for Dedicated Accelerator Studies”](#).